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III.—WORDS FOR COLOR IN THE RIG VEDA.¹

A grave responsibility rests upon philologists. The so-called color theory, which assumes that the human eye was incapable three or four thousand years ago of perceiving certain colors of the spectrum (chiefly green and blue) that are now clearly seen and distinguished, has been abandoned by Magnus, who was in this respect the representative of physical science. Philology, therefore, remains alone in its support of this theory; and it is mainly through the writings of two philologists, Gladstone (on the color-sense in Homer) and Geiger (on color in Rig Veda, Zend Avesta, etc.) that this responsibility has been incurred. The latter author has been received as authority and upheld by Weise (*Farbenbezeichnungen*, *Bezzenb. Beiträge* II, 273 flg.), and the essay in question (Geiger: *Ursprung und entwicklung der menschlichen Sprache und Vernunft*, Bd. II, 3tes Buch) is quoted by the non-philological world generally as proving that the disputed colors were *actually* not mentioned in the Rig Veda, and were in all probability unknown at that time; in Geiger's own words, 'the men of that time did not and could not call anything blue.'

Of all the literatures which have been dealt with in this connection, those of Greece and India are paramount in importance, for the others (Koran, Hebrew Bible, Zend Avesta, etc.) are either not so early a growth or are less extensive or less distinctively national.

It is the object of this paper to inquire into the correctness of Geiger's deductions, and in doing this the writer may state at the outset that from an independent investigation of the color words in the Rig Veda he was led not only to question the facts adduced by Geiger, but also to doubt whether his application of these facts (even if proved) be admissible.

In Part I is subjoined the occurrence and application of all color words found in the Rig Veda (Geiger treats in detail only the disputed colors), and in Part II some remarks have been added in regard to the results deducible from the use of color words in the Rik, the methods of Geiger, and the inferences to be drawn from this special study in regard to the color theory in general.

¹ An Essay read before the American Oriental Society in New York, Oct. 1882.

PART I.

§1. On examining the words in the Rig Veda which indicate color, we notice as in other languages that there are a great number of epithets which, strictly speaking, are not designations of color at all, but simply imply or suggest it, and, furthermore, that the optical effect thus suggested is always white, while the simple idea of glancing, shining, dazzling is generally fundamental to this attempt to reproduce by verbal signs the most striking effect which light produces on the retina. Foremost among such words in the Rik are the derivatives formed from the roots *arc* and *bhā*. The first of these gives us *arci*, *arcis*, that which glances, flame (cf. *arka*), and thence *arc*, *arcin*, *arcimant*, *arcivant*, employed as epithet of the *Açvins* and *Maruts* and of the "flaming" stars; the adj. *arcin* in *arcinā padā* seems to indicate the rapid movement of the feet, but in *arcā māsā* it is the shining of the moon that is prominent, and *arcaddhūma* illustrates the adjective force of the participle "(fires) of which the smoke glances." It is possible that we have also in the word *ṛkṣa*, bear, ῥρκτος, which Kuhn regards as derived from the same root, an allusion to its gleaming (reddish) color. It is at any rate noteworthy that in the epic poetry we find the same word used to indicate the color of horses distinct from white (*Mbhā* VII 132, 30) *ṛkṣavarṇāḥ hayāḥ karkair miçrāḥ* (bear-colored steeds mingled with white ones). If this be the case we have here an example of what will be noticed below, where words have evolved from a root that contained in itself no idea of color a distinct color sense, through applying derivatives of such roots to objects that have color. The second root, *bhā*, indicates the general idea of glance. The adjectives and compounds derived from it (*bhāmin* of *Agni* and clouds; the substantives *bhās*, *bhāma*; *bhāsas* of *Agni*; *vibhā* of *Uṣas*; *vibhānu* of *Agni*; *vibhāvan* of *Agni* and *Uṣas* with the feminine form *vibhāvarī* of *Uṣas* and as substantive in the later language "the bright," *ī. e.* night; *vibhāvasu* of *Agni*) contain no idea of color more complex than that of simple glance or brilliancy.¹ We may say the same of the derivatives of *div* (*dyu*), *dyumat* (of *Agni*, *Soma* and other gods, the chariot, etc., as well as in other applications where it is difficult to say if clearness of glance and tone or beauty in general is meant),

¹Although *vibhāvarī* occurs in the meaning "yellow ginger," yet this use is common to all words meaning night, and the idea of yellow in this application is later and foreign to the Rik.

dyumna (glance) and its compounds, together with didyut and vidyut (lightning), cf. sudyut and possibly sudina (of the day and the morning) unless the derivation from *dī*, shine, be rejected and sudina be only *dina* in composition as *purudina* and *madhyam̐dina*. None of these has a developed meaning, nor is there in the Rik any instance of their use where the simple idea root is not sufficient explanation of the sense. Another root which may perhaps be included under *arc* (= *arj*) shows two distinct inclinations, if we may so speak, first, that expressed in *arjuna*, which preserves throughout the root-meaning of shining, and is applied to the day (*ahar*), the thunderbolt (*vajra*), the dawn (*Uṣas*), etc., in opposition not only to black (*kṛṣṇa*), but also to the yellow gold color (*piṣ-āṅga*). In the same way *rajata*, another derivative from the same root, occurs once in the Rik in the meaning glancing (white), and in the later literature acquires as substantive the meaning glancing-white-metal (silver, compare the unconscious pleonasm of Horace, *argenti splendor*). The other inclination of which we spoke is that shown in *ṛjra* which stands in relation to *arj* as *ṛkṣa* to *arc*. The idea of glancing passes into that of glancing-red, and even the darker red (distinguished from *rajata* and *aruṣa*) is so indicated, the application of the word being chiefly to horses (cf. *ṛjraçva*), the celestial steeds, and to fire (compare *ṛjriya* of *agniyoni*, and *ṛjīti* of offering, beams, etc., and *ṛjika* variegated). Of like origin are the words *rajas* the sky, and *rajanī*, night, in reference to the shining stars (cf. *prabhātāyām rajan-yām*). Among the verbs of shining, glancing we must include the most frequent of them, *vas*, with its many derivatives (*uṣr*, *uṣ*, *uṣas*, the *aurora*); the adj. formed from the same stem, *vivasvan*, *vivasvat*, and the possibly connected *usra*, *usriga*, *uṣṭr*, *uṣṭra*, all of which unite the idea of glancing to the indistinct suggestion of the *red* glow of morning, and so substantively the dawn; or to that of the red gleam of ox and steer, etc., and so substantively ox, buffalo. But in all these cases simple glance is the fundamental meaning.

Bhrāja from *bhrāj* (fulgeo) used of the sun (cf. *agnibhrājas* = *ignis fulgor*, and *bhr̥gu*); *rājin*, contained in *a-rājin* of mountains; *pājasvat* from *pājas* (*sahasra*°) gleam (cf. *pṛthu*°) are not used often or clearly enough to see if any idea further than that of glancing has been reached by them. Two more examples complete this list where the color idea is marked enough to be noted by the addition of that word (*varṇa*). The first is *candra* from *cand*, to shine, especially called the *candravarṇa*, and this developed color

is not reddish but yellowish, so that it is the moon-color, as, indeed, *candamas* is the moon and *candram* is gold. It is used with *hiranya* (golden) of divinities, garments, fire, etc. (cf. *hariṣcandra*, *çcandra* being the older form of the word). It is found again compounded with *puru* (*puruçcandra*) of deities, sky and chariot. Like the *candravarṇa* is the *ruçanvarṇa*, from *ruc* to glance, which characterizes the (yellow) glancing *soma*. From the root-meaning shine which appears in *ruc* and its derivatives *rukṣa*, glancing (of *Agni*) *roka*, light, *virukmat*, *viroka* (once in *viroke uṣasas*) and *virokin*, the glancing (of divinities) we find an apparent approach to distinct color in *rukma*, the shining (-yellow, gold) and in the ptc. form *ruçat* (*λευκός*) which is, as color, opposed to *çyāva* (brown) and *kṛṣṇa* (black) and is particularly termed a color in the compound with *varṇa* given above, with which we may again compare the compounds *ruçatpaçu* (*uṣas*) "who has glancing herds," referring to the red or yellow clouds (cf. *ruçadgo*, *ruçat* of *dhāsi*, milk, and *ruçadvatsa*) and *ruçadūrmi* (the fire) "which has glancing yellow or red waves (flames)." Other forms in the *Rik* are *vasuruc*, *vasurocis*, which (whether from *Vasu* (B. R.) or *vasu* as simple adj.) exhibit the two roots *vas* and *ruc* compounded together.

One root is found, the primary signification of which is doubtful: *çvit*, if it mean simply to shine, belongs here. B. R. give the meaning "be white," while *Weise*, in the essay referred to above, insists on the fundamental meaning "to burn." The adjective formed from this, *çveta* (opposed to *kṛṣṇa*, cf. *Zend spaeta*, Gothic *hveita*, Eng. white) means simply white, and is so used as epithet of the gods, the white steeds of *Agni*, the *kalaça* (elsewhere *hiranyasya kalaçaḥ*), while in later literature applied to *parvatāḥ*, the mountains, *çveta* describes the appearance of the snow. So too *çvitra* is later the white leprosy and *çvitrin* in *Manu* is leper. Compare with these *çvitici*, *çvitna*, *çvitnya*, *çvityaṇc*, *çvetya*, and also the substantive *çvetanā*, the lighting up of the dawn (like *sūryaçvit*). In all these words whiteness is the color expressed, if indeed any real color is expressed (*sūryaçvit* contains a second idea of glance in so far as *sūrya* itself is ultimately only the glancing, *svar-sūr*). On the other hand the form *çyeta* seems to mean reddish white, as the feminine *çyenī* is the aurora, and the adj. itself is applied to the colors that appear at the rising and the setting of the sun, and to the fire. In *çyena*, eagle, we have possibly the same word. According to Indian authorities *çyeta* itself is regarded as equivalent to *çveta*, white. Whether *çyāma*, black,

is from this root is doubtful, the word does not occur in the Rik, and the apparent contradiction of white and black could be explained only by granting Weise's proposed rendering of *çvit*, etc., as denoting the color of burning (glancing and thus white) and burned (so black) as in Germ. blank against Eng. black.

There are, however, other methods of forming adj. of color than by developing the idea of red from roots meaning glance. Weise has sought to prove that the original and most primitive color words arose from roots which signify to burn (namely, *çvit* and *ghar*), but in the Rig Veda we cannot resolve the roots meaning "shine" back into a more primitive "burn," except in isolated cases, and outside of these we find other roots which have at first neither of these ideas, but which form similar color words. Among these are the derivatives from *ci*, *ki*, and *cit*, where the original meaning is that of perception. From the idea 'this object is perceptible,' we have as the next step 'this object is conspicuous, bright,' and so we arrive at the idea of brightness, glance, gleam, and this in turn develops into the more distinct notion of color. In such examples we have, to be sure, the idea of glance preceding that of color, but not as the ultimate meaning. So *citra*, from *cit*, is used to characterize gold, garments, chariots, as well as divinities and the sky (cf. *ex gr.* I 115, 1, *citram devānām anikam*), while in the post-Vedic language it means variegated. Other Rik forms from this root are *cetana*, *cetas*, *vicetas*, where the meaning is uniformly that of bright, sparkling. Similar is the growth of those words of which *ketu*, glancing (banner), is a specimen, from *ci* (*ki*) to perceive; cf. *ketumat*, *sahasraketu* (of the chariot of deities). It may be questioned whether real color enter into the meaning of these derivatives at all, as they stand in relation to the developed root meaning shine much as *candidus* in Latin does to *candeo*.

The same process whereby 'perceptible' develops into 'glancing' and possibly thence into an idea of color, is gone through with by roots meaning 'be pure.' Thus *çundhyu*, bright, clear, used as epithet of the sun's horses, is derived from *çudh* (*çundh*) purify (*καθ-αρός*). Thus also from *pū* (Lat. *purus*) to be pure, clean, we have *pāvaka*, used of Agni, Varuṇa, Aurora, etc., not only to denote "purifier," but also to express the gleaming color-effect which is more expressly indicated in *pāva*, found, as it is, only in connection with *hiraṇya* (golden), to describe the soma (*hiraṇyapāva*). Like these words which denote brightness by an idea of purity are the negatives *adhasvan*, *aripra*, *arepas*, used of physical

objects and meaning literally spotless. With all of these we may place the root *çuc* and its derivatives often employed in union with *pāvaka*. The noun *çuci* and the adjectives *çukra* (*çukla*) denote glance, brightness (cf. *çucivarṇa*, *çukra-varṇa* and substantive *çocis*, *çoka*, etc.) and express the idea of brightly adorned, as does *çubhra*, a similar word meaning either clear-shining or well-adorned, and, in the later language, white, while in *çoṇa* (especially of fire and the steeds of the deities) we have the idea of red predominating, which later gives the neuter substantive *çoṇitam* the meaning blood. It is, however, doubtful if *çoṇa* be connected with *çuc* at all.

Again, in *çukrapig* we have another train of thought in developing the color idea. This *pig*, which in *piṣaṅga* and *piṣaṅgarūpa* has developed into the meaning gold-color (cf. *hiranyapeṣa*) or yellow-brown (contrasted with *arjuna*) and characterizes divinities, rays of the sun, etc., has as ultimate meaning the idea "adorn," prepare (by cutting), decorate, as in *peṣa* and *supeṣa*, and this decoration is applied to color in *piṣaṅga* (and possibly in *piṣa*, the (red) stag. Possibly the same idea is to be found in *suçilpa*, once applied to day and night, from *çilpa*, adornment, in the sense 'well-adorned,' and so 'many-colored' (so B. R.)

Beside these we find in one, perhaps two forms, that the idea of sharpness may be capable of a similar development. The first of these is *tejiṣṭha*, properly a superlative adj. from *tij*, be sharp; from the meaning of very sharp we have first the idea of hot and then of sparkling. The primitive idea is seen in its application to the rays of the sun which are sharp or hot, while in limiting water (soma-drop) we have the transformation into glancing; the gleam is piercing bright, cf. *dhārā agneḥ* the glare (sharpness) of fire. Possibly too, *tapu* may belong here.

Under *çvit* we have purposely omitted *çiti* in its Rig Veda compounds *çitipad* and *çitiprṣṭha* (the word is not found in the Rik uncompounded). It is doubtful if this word is derived from *çi*, burn (*çuçvit*) or from *çā*, to sharpen (so Grassmann). Not only the derivation but even the meaning of this word is matter of dispute, as it may mean either white or black (v. above under *çvit*). *Çitiprṣṭha* is applied to the steeds of Indra and figuratively to milk, *çitipad* is epithet of chariot and the brown steeds (*çyāva*) of Savitar. The assumed double meaning of *çiti* may have been the result of the later *çitikanṭha* used with *nilakanṭha* as epithet of Rudra. In the later form *çita* B. R. assume a confusion of *ç* with *s*, *sita* being a

post-Vedic word for white. Another development of the glancing, shining idea (if not of positive color) is to be seen in *tvīṣimant*, *tveṣa* and the substantive *tvīṣi*, where the simple root denotes only rapid movement, and thence glance. These adjectives are applied to fire, the countenance of the Maruts, the rays of the sun, etc., while the substantive expresses an attribute (glance) of fire and sun.

We leave this division with the remark that *rudra*, which in Grassmann is said to mean glancing, must, to effect this, be derived from a suppositious root, *rud* to shine, and *phalgva* (*phalgu*) said by Grassmann to be 'reddish' is defined by B. R. in accord with its derivation from *phalgu*, weak, worthless.

§2. We pass in this division to those words where the first color of the spectrum, red, begins to be indicated by direct comparison with red objects. First we mention *agnirūpa*, fire-color, like *agni-ṣrī* (of the glory of fire), *ṣrī* itself (cf. *hariṣrī*) meaning glory, beauty. Both of these terms are applied to the storm-gods, like *varcas* (glory) and its compounds. So *indhanvan*, having the brilliancy of lighted fuel, and *indhana* (cf. *αἶθων*) of the clouds (*dhenu*). The root *indh* means to burn, to light a fire. Similar in sense is *aṅgāra*, a coal, so called from its fiery appearance (*aṅj*, adorn, glow, shine, Grassmann) and in the later language one of the names of the "red planet Mars." Perhaps the best of the few examples in this list is *rohita* (later *lohita*), from the root **rudh*, to be red, which underlies *rudhira* (A. V.) blood. The shorter form *rohit* appears as feminine substantive in the meaning 'red mare,' and the feminine *rohiṇi* shows a like usage. The short form occurs again in the compound *rohidaṣva*, and as adjective *rohita* is generally applied to cattle and horses (*hari*, *praṣṭi*, *vājin*); while substantively *rohita* means a horse, just as *lodha* (from the form with *l* like *lohita*) means a red animal. *Kalmalikin*, said to mean flaming, as epithet of *Rudra*, is derived from *kalmali*, gleam (*vielleicht glanz* B. R.) which occurs in A. V.

Together with these we may place the word *su-kimṣuka*, derived from the *kimṣuka*, a tree with red blossoms. The adj. thus formed by the prefix *su* (*εὔ*) is said by Grassmann and B. R. to mean 'beautifully ornamented with blossoms of the *kimṣuka* tree.' The adjective occurs, however, only as epithet of *sūryā* (figuratively as *ṣalmali* with the epithets *viṣvarūpa* and *hiraṇyavarṇa*) and in the *Nirukta* (quoted by B. R.) the adjective is explained by *sukāṣana*, fair to see. It seems to me probable that we have here a direct

comparison with the main characteristic of this tree—its red appearance, as in the following with the characteristic of gold (*hiranya*). This use we may illustrate from the later language, since the form is so isolated in the Rig Veda, and by comparing the epithet with Mbhā. IX 58, 34, we can understand how the red blossoms of this tree provoke a direct comparison of color. The epic passage is as follows :

. . . rudhirenā 'bhisamplatau
Dadr̥çāte himavati puṣpitāv iva kiṁçukau.

(The two warriors) dripping with blood looked like two *kiṁçuka* trees blooming on the mount of snow ; or again, XIII 30, 43 : “down fell the warriors, wet with blood their limbs, like two *kiṁçuka* trees cut down.” Like this is also XII 166, 62-3 : “And the foul earth grew all filled with bodies dripping with blood like hills with *kiṁçuka* trees.” So in the Rig Veda passage it seems to me that the *tertium comparationis* is rather the fiery red common to both the sun's chariot and the tree's blossoms. We have in another form *sūryatvac* (cf. *hiranyatvac*) an attempt to express the color of the Maruts by referring their appearance to that of the sun, cf. *sūro varṇah* (IV 5, 13) and the two forms *sūryaṇmi*, *sūryaṇvit* ; and this word expresses also the glance of a chariot or the radiance of a goddess.

§3. Words for red and yellow, or reddish-yellow, which are not the result of comparison with physical objects and are not derived from roots meaning glance, etc.

Foremost among these is *aruṇa* (cf. *aruṇapsu*) red, bright-brown, golden-yellow. Any distinct standard whereby we may estimate the exact worth of this adjective is wanting. It is applied to the dawn, the sun, the soma (plant), the color of the wolf and cattle, and means as substantive the red-yellow cow (dawn). As compound adj. it appears in *aruṇāçva*, of the horses (cf. *aruṇi*) of the Maruts, and as *varṇa* (I 73, 7, *naktāca cakrur uṣasā virūpe kṛṣṇamīca varṇam aruṇamīca saṁdhuḥ*) is the glow of dawn in antithesis to the blackness of night. Similar to this in form and meaning is *aruṣa*, which is the fiery red of the thunderbolt, the fire, the steeds of Agni (cf. of Agni *aruṣastūpa*, with red flame), the sun, the dawn, and is found like *aruṇa* in the fem. as substantive, *aruṣi*, meaning red cow (dawn). *Aruṇa* (in *aruṇahan*) is perhaps (B. R.) only another form of the same word. With both of these compare the compounds *tryaruṇa*, *tryaruṣa*, the first being a proper name, the second used as epithet of cattle, ‘red in three places.’ With these,

and in sense closely related, stands *bradhna*, light red, and yellow which is used as epithet of fire, soma, and of the sun's horses. It occurs but infrequently and with no great variety of application. In an interesting compound of this word (*çatabradhna*) *bradhna* seems to denote the shining metal end of Indra's weapon (*iṣu*). Six colors, we are told (X 20, 9), accompany Agni the fire god : *kṛṣṇaḥ çveto 'ruṣo yāmo asya (agneḥ) bradhnah ṛjra uta çoṇa yaçasvān*. This list includes many of the words discussed above, and it is safe to say that there is not (with the exception of *kṛṣṇa*, black) one color word here mentioned to which we can give a meaning that will answer all cases ; at times applied to yellowish objects, at times to reddish, again to objects partaking of both colors, these words are as vague in meaning and as wide in application as the English use of purple in purple blood or purple grape.

Gaura, which is applied as adj. to milk, is used as substantive to denote a kind of buffalo, and in the frequent expression "*gauro na tṛṣitaḥ piba*" seems to be a general designation of cattle. Latin *galbus* has been compared with this word.

Like the use of the *kinçuka* tree in denoting color (v. above) is that of the *udumbara* (fig-tree) in the once found form *udumbala*, to which B. R. assign the meaning copper-colored, although its use as epithet of Yama's messenger might lead us to compare it with *çyāva*, used of Yama's steed. It is possible that the comparison is not with the leaves but with the yellow fruit. A darker red than any epithet hitherto noted is that in *kapila*, the color of the ape (*kapi*, cf. *vṛṣākapi*) used once of *garbha*. The development of a general color-term like *kapila* from the name of an animal is rather surprising, and Geiger maintains that both *gaura* and *kapila* are indicative of color first and later of names of animals. The inverted process is common enough as we have seen, and many animals are named from their color, just as they are from the sound they produce (*kāka*, *cakravāka*, *kroṣṭṛ*); nevertheless we may compare *pidāku-sānu*, *mayūra roman* (v. next paragraph) to show that the characteristics of animals are used in determining color. Dark yellow or reddish brown is the meaning assigned *kadrū* (in *kadrū*) which appears only as substantive, the dark brown or dark yellow soma vessel (cf. *trikadruka*). *Babhru* is a more genuine color word than any of these. It is really the mingled color of dark red brown, but apparently darker than *piṅgala*, with which it is in Sk. frequently connected (*piṅgala* does not occur in Rik, but *piṅgā*, bow-string, is referred to *piṅga*, yellow, apparently the same as *piṅgala*).

Its use is varied, being applied to Agni, Rudra, soma, horse, cow, and the (brown) dice (nuts). It is distinguished from *aruṇa* *bradhna* and *hari*, and is used substantively to denote certain plants.

As the last word in this category we have the root *ghar*, to burn (cf. *gharma*, heat) which develops in the adj. forms into a color meaning. The idea of burn or burned is the real basis of the color idea, for this idea does not come through the meaning glance and sparkle, but is the fire color itself. The word is, however, peculiar in its application, especially in later Sanskrit, having there the meaning green as well as reddish-yellow. The first group of derivatives comprises *hari*, *harita*, *hariṇa*, the second (with stem-vowel weakened) *hiri* and *hiranya*. The prevailing meaning in all these words is yellow, fallow, and, in general, any change from this meaning seems to incline rather to the lighter than to the darker end of the spectrum, or, to speak more correctly, the underlying notion of burning, fiery, includes at first red and yellow, and, though use has almost confined the application to the latter, yet the former meaning is also occasionally brought into prominence. The most frequent use of the short form *hari* is in the dual as substantive to denote the two steeds of Indra (cf. *haryaṅva* of Indra), and these receive in turn epithets which show that these steeds are regarded as yellow, red, or whitish (*aruṣa*, *ṛjra*, and the once used *rohitā hari*, together with *ṣitiprṣṭha*, v. above). *Hari* is applied again to soma, which as plant or moon is yellow (though elsewhere soma is called *aruṇa*, *babhru*, *ṛjra*); cf. IX 97, 9 (*somaḥ*) *divā harir dadṛḡe naktam ṛjraḥ*—the moon looks pale-yellow in the daytime but reddish at night. To the soma itself *hari* is applied as limiting the *aṃṣu* (plant), *indu* (drop of the plant), and to the press stones (yellow with soma juice). Beside this frequent dual form we find singular and plural used to characterize the steeds of Agni, the sun, Savitar, the wind (*vayu*), the *Aṣvins*, and soma (moon), or the gods are conceived as steeds and receive the same epithets, or *agni*, not as god, but as fire, and *vajra*, the thunderbolt, are so called. The form *harit* (fem.) is used (like *aruṣi* and *rohit*) to denote the red or yellow mares of the sun, Agni, Indra and Soma, or the fingers spoken of metaphorically as steeds. *Haritvat*, gold-yellow, is epithet of the glory, brightness of the sun (*haritvatā varcasā*) where, if *varcas* itself means brightness, we may translate “by the glaring gleam.”

The longer form *harita*, fem. *hariṇi* (cf. *hariṇa*, gazelle, fallow-

deer) occurs less often than hari, but in somewhat wider application, although applied like the other form to the divinities and their steeds, with the fem. dual hariṇī used in the same way as hari. Harita thus limits the āyudha or vajra, thunderbolt, the ape (in vṛṣākapi), the chariot of Indra, the rūpā, forms of the gods, the mouths of the press-stones (as steeds), and, referring to soma, serves as epithet of ruc, glance, ṛṅge, the two horns, and ṣiprā (lips, vizier) of Indra. It is used too as adjective to vanaspati, the sacrificial post, when accompanied by the epithet hiranyaya, the golden. The meaning blond or auburn may be assumed for haritā ṣmaṣṛuṇī, the yellow or reddish beard of Indra. Once, too, we find the word employed to indicate the fresh wood as opposed to ṣuṣka, dry wood. Here it would seem we had a meaning approaching that of the later language, but harita is applied apparently to the trunk of the tree, not the foliage (cf. hariyūpa in hariyūpīya, the name of a place which 'has golden posts').

Harita is also applied to the frog (maṇḍūka) where we would naturally translate the word by green rather than by yellow. Omitting, however, the pair of cases where the frog is spoken of without regard to his color we have (in VII 103, 4) an antithesis between the frog that is prṇī (speckled) and the one that is harita, and also (ib. v. 6) "the frogs have a like name (samānam nāma)," but 'prṇir eko harita eka eṣām," and (ib.) the adj. virūpa, variegated, is applied to them. The "speckled" frog is so probably by reason of his black spots, the harita may therefore, as far as this passage shows, be taken in its earlier sense of yellow or its later one of green.

Prthivī, the earth, is called in III 44, 3, harivarpas, which signifies according to B. R. "presenting a yellowish greenish appearance." The verse reads: Dyām indro haridhāyasam, prthivīm harivarpasam | adhārayad . . . This passage Ludwig translates "he has taken possession of the heaven that sends (us) down the green, and of the earth which has a green covering." And we must admit that the earth here receives an appellation which we could in later literature unhesitatingly render "green," and such meaning is not impossible here, though from the rest of the hymn it would be more natural to give the same meaning in this word to hari as in the neighboring haryaṣva and similar compounds which are used so often in this hymn. The same form (harivarpas, in X 96, 1) occurs as epithet of Indra.

From I 50, 12, where the singer desires his (yellow) jaundice

(hariman) shall pass upon the parrots, Geiger seems to draw the conclusion that the (green) parrots are regarded as yellow. But the color is not spoken of as passing over to the parrots, all parrots are not green, and finally the same disease is desired for the *hāridrava*, an unknown yellow bird (from the same root with lengthened stem vowel, as in *hāriyojana* 'the harnessing of the yellow steeds'). The compounds of these words show much the same usage as the application of the simple adjectives, *harikeṣa* and *hariṣmaṣāru*, yellow-haired (of Indra, Agni, and the sun); *harijāta*, born in yellow red glance (of Indra). We have, too, some compounds where *hari* as first member means Agni, as *harivrata*, or Soma, as *harivat*, *haripā*, or the press-stones, as *haridru* and *hariṣāc*, or the thunderbolt, if *harimanyusāyaka* be correctly interpreted, or the steeds of the gods, as *hariyoga* and *hariṣṭhā*. Like the use of *harit* is that of *hari* in *hariṣipra*, and in *hariṣcandra* (cf. *hariṣrī*, mentioned in 1) we have the two roots, one of fire, one of whiteness, united (cf. *hiraṇyacandra*). From the other form, *hiri*, we have similar compounds, *hiriṣipra*, *ṣmaṣru* (of Agni and Indra), and *hirimant* (of Indra) gleaming, to which we have the corresponding form *harivant*. The form *hiri* does not occur except in composition, and that but seldom. *Hiraṇya* (Zend *Zaranya*) with its many derivatives is employed in the universal sense of the yellow-gleaming metal (gold), and since this meaning is universal we note only those compounds which may illustrate the compounds of *hari*. Thus this word is also compounded with *keṣa* (hair) to describe Agni, and *hiraṇyaya* is an adjective applied to cattle, thunderbolt, etc. So *hiraṇya-rūpa* or *hiraṇya-varna*, gold-color, which underlies the meaning of *hiraṇyākṣa*, golden-eyed, of Savitar, is like the use of *hari* in Rig Veda when applied to the persons of the divinities (*haryakṣa*, however, is post-Vedic and in epic, *Mbhā* X 1, 38, means yellow-green-eyed: [so'paṣyat] *ulūkam haryakṣam babhrupīṅgalam*).

§4. We come now to the second color that our forefathers are said to have "had no name for, because they could not distinguish it from black, grey and brown" (Geiger, *bd.* II, s. 356). There is but one word under discussion, *nila*, which means in classical Sanskrit dark blue. Geiger asserts that in the Rig Veda this word means only black or dark-brown, and even in the later epic he would prefer to understand grey as the meaning of the word (s. 307). The Petersburg lexicon defines *nila* as dark-colored, particularly dark-blue, blue-black. Before entering on the discussion

in regard to the Rig Veda we would like to point out its exact meaning in the later literature, as the cases where the word occurs in the Rig Veda are few. On glancing over the various compounds of *nila* found in the classical literature we see at once that the prevailing idea is dark-blue, and that the meaning "blue" is so inherent in the word that the accessory notion of *dark* easily vanishes, whereas the meaning *blue* remains, so that we may often render the word simply as blue, but never simply as black. Especially where *nila* is introduced into languages that have no affinity with Sanskr̥t this prevalence of the blue is conspicuous, as, for instance, in Tamil, where to-day *nila* is synonymous with sky, *i. e.* the blue. But even in pure Sanskrit the *nilavar̥ṇa* is blue, and in the substantive form *nila* is synonymous with the blue-water-lily or the blue sapphire. Generally, however, the word denotes a darker blue, as in expressing the color of the snake's back, the waters of the sea, the neck of the peacock (cf. *nilakaṇṭha*, *nilagr̥iva* of *Çiva*), or the indigo (cf. Rood, *Modern Chromatics*, p. 21). The form *nilaka* has the same meanings, though used perhaps more decidedly in the sense blue than dark-blue. The derivation of the word is unknown, for its assumed connection with Lat. *niger* (Geiger, s. 306) is at best but a guess. If we turn from the classical to the Vedic use we find first that *nila* in the Atharva Veda is distinguished from *lohita* and from *piṅga* (red and reddish-brown) and occurs in a few compounds, of which the exact meaning is doubtful, although they *seem* to denote more the dark than the blue color, but as both these forms (*nilaṅikaṇḍa* and *nilanakha*) are mere names of demons, the latter being distinguished from the green or yellow demons, called *harita* (19, 22, 4 and 5; *nilanakebhyaḥ svāhāḥ*, *haritebhyaḥ svāhāḥ*) we can assign no exact meaning to the adjective (*nilaṅikaṇḍa* is like *nilalohita* an epithet of *Çiva*). In the same way *nilam udaram* (15, 1, 17) is opposed to the *lohitaṁ pr̥ṣṭham* of the anthropomorphized deity, as in *Çat. Br.* *çukla*, the gleaming white is distinguished from *nila*, where, however, black is not necessarily the meaning of *nila*.

Geiger and Weise assume that this word *nila*, which may occasionally mean dark without reference to blue (?), but which in the majority of cases in the later literature has a distinctly blue tone, is, in the Rig Veda, entirely devoid of the meaning blue. If, now, the derivation is unknown and the word everywhere except in the Rig Veda appears to mean dark blue, and even blue alone, it will be necessary, in order to support Geiger's statement, to prove that

nila in the Rig Veda is applied in such connection that it is here impossible to attribute to the word any meaning of blue at all.

We examine then the use of nila in the Rik. The word never occurs alone, but always in composition. First as adjective with the suffix -vat, nilavant, the word is used once as epithet of drapsa. If we isolate the word from its connection we could here learn nothing of the meaning, for drapsa (literally *drop*) is elsewhere called white (çveta), black (kṛṣṇa), and red (aruṇa). The use is here, however, metaphorical, and drapsa means the spark of the fire, the verse in which it is contained being part of a hymn to Agni (VIII 19, 31): "Thy spark, O Agni, is nilavān, kindled in good time." Now we connect no especial idea of darkness with a spark of fire, and if we compare this passage with VII 87, 6, we find *drapsa* is used metaphorically of the moon and receives the epithet çveta, the white, the shining spark in the sky. Since in the first passage the time of lighting the fire is meant, I have thought it possible that nilavān here might betoken the blue color of the first small flames that arise when wood is kindled. Not insisting on this, however, it remains to be proved that the spark of a newly kindled fire is black or dark—yet such must be the meaning if Geiger is correct. Nilavant occurs in one other passage as epithet of sadhastham, place, home, refuge. It is, however, questionable whether the word which belongs in this passage can have any influence on the discussion at all, for if we read with Müller's large edition, nilavant, we have an entirely different word meaning nest-like (so understood by Sāyana). The former reading nilavant is, however, introduced into Müller's small edition, and is endorsed by the Petersburg lexicon. Regarding this reading as correct, we find that in the passage in which it occurs the poet is speaking of Bṛhaspati, who is said (IV 50, 4) to be arisen out of light, and (II 23, 3) to be the enemy of darkness. We are therefore inclined at the outset to be sceptical, when we are asked to believe that in this passage (VII 97, 6) the same god is represented as one whose strength is a *dark* place, nor are we more inclined to believe this when we examine the whole passage: tam aruṣāso aṣvā bṛhaspatim . . . vahanti sahaçcid yasya nilavat sadhastham nabhona rūpam aruṣam vaśānāḥ, *i. e.* "red steeds carry this Bṛhaspati of whom the power is a place nilavat, being clothed as with a cloud in red color." In the following verse we are told of his golden weapon, and the whole picture of the god is one of bright color and glance. Why then should his strength be a place of darkness? It is not here the picture of a

god of light born from the darkness that precedes the dawn. With this idea we are familiar, but here we have sadhastham, either a place of refuge for those who invoke the god, or his place, his home (as in A. V. II 2, 1, *divi te sadastham*) is itself a source of strength. In the latter case we might translate: "Bṛhaspati whose strength is the dark blue place," *i. e.* the sky. But however we take sadhastham, what sense do we make from the passage by translating *nilavat* dark-colored?

Beside these cases *nila* is used twice (III 7, 3, V 43, 12) in composition with *prṣṭha* (back) as epithet of Agni. *Nilapṣṭha* has been translated "he whose back is black," *i. e.* the fire. We are accustomed to the idea of black in connection with fire, for we have it, for instance, in the passage quoted in §3, where the path of the fire is black (*krṣṇa*), and such compounds as *krṣṇā-yāma*, *krṣṇa-vyathis*, *krṣṇa-vartani*, *krṣṇa-sita*, *krṣṇādhvan*, give the same idea of the black path. But in all these expressions the adj. is invariably *krṣṇa*, and the substantive invariably means the *track* left by the fire (so too in *krṣṇa-pavi* and in the doubtful passage I 141, 8, *krṣṇāsas sūrayah*) while in *krṣṇagarbha* and *krṣṇa-yoni* the darkness out of which the fire comes is meant. We have, moreover, direct testimony to the effect that the "back" of Agni is not regarded as dark, but as light: I 58, 2, *prṣṭham prūṣitasya rocate divo na sānu*, the back of the fire shines like the back (vault) of the sky. Even could *prṣṭha* refer to the track of the fire it would not prove that *nila* is here dark, for the path of Agni is also regarded as glancing, cf. *citra-yāma*, of Agni (III 2, 13). This same compound is employed to characterize the *hamsa* (pl.), a bird variously described as goose, crane, swan, flamingo, etc. In VII 59, 7, they are described as *nilapṣṭhāḥ*. Whether *nila* here means dark-blue or black remains an open question, but that the compound must necessarily mean dark without any idea of blue cannot be proved. The *hamsa* as steed of the Aṅvins receives the epithet golden-feathered (*hiranya-parṇa*), but this is figurative. *Nilāṅga* is a later name for the Indian crane (from this same *nila* + *āṅga*, limb) which is said to be bluish in color; and *nilākṣa* is said to mean the goose from its (not dark but) blue eye (*akṣa*). Altogether, dubious as the case is, the similar usage of the later language might lead us rather to incline to the meaning blue than black.

These are all the cases in the Rig Veda in which *nila* occurs, excepting one passage (X 85, 28) where it is found compounded

with lohita (late form for rohita); and, as Geiger says, the passage is probably taken from the Atharva Veda, as it is identical with A. V. 14, 1, 26. Even if genuine, and if lohita were not itself a suspiciously late form, we should learn nothing from the passage of the color of nila, for reference is made to bewitchery, *kṛtyā*, and the verse states that the color of this power is red and nila, which might be black, blue or any other color. It is from the fact that the sky is not called blue in the Rig Veda that Geiger doubts if blue was known as a color, and after examining the use of *nila* he draws from the above few, and, if I am not mistaken, in part contradictory data the conclusion "blue was not mentioned and was not known in the time of the Rig Veda, but develops out of the idea black or brown, the only meaning that *nila* can there have." The facts of the case are, however, that the *word* for dark-blue occurs in the Rig Veda, and Geiger has not proved that this customary meaning is impossible in the Vedic application of the word. Why the sky is not called blue will be discussed in Part II.

§5. Without any notion of lighter color is *çyāva* (dark-brown), employed as epithet of horse and chariot, and substantively as (brown) horse, nomen proprium, and (in the feminine form *çyāvī*) the brown mare, the night. It is contrasted with red, rohita, and white, *çiti*-(pad). The later post-Vedic word *çyāma* (dark green or dark blue) appears to be a related word.

Blackness, or darkness (*andhas*, *tamas*, cf. *andha* with *tamas*, and *tamisrā*, night) is often implied by negation of light, as in *aruc*, *arājin*, *acitra* (cf. *aketu*), while black itself is denoted by the adjectives *asita* (*sita*, white, does not occur in the Rig Veda) and *kṛṣṇa* (*varṇa*). The latter occurs in many compounds, and the feminines *kṛṣṇā*, *kṛṣṇī* are used as substantives to denote the blackness of night or night itself. *Kṛṣṇa* as proper name is equivalent to *Rāma* (the dark), and its related *rātri*, night.¹

§6. It remains to say a few words in regard to some designations which come under none of the above heads: *palita*, grey, and *palasti*, said by Sāyana to be the same as *palita* (in *palastijama-dagni*) means the greyness of years, as substantive (pl.) grey hairs. We have several words and expressions meaning varie-

¹ Night, as we have seen from many examples, may be termed either the dark or the bright, according as the dominant idea is that of gloom on earth or of light among the heavenly luminaries. In *doṣā* and *pradoṣam* (evening, darkness, opposed to *uṣas*, dawn) Grassmann sees a derivative from *duṣ*, to spot, *darken*.

gated, as *rjika*, *vi-rūpa*, *viçvarūpa*, *puru-rūpa* (cf. X 169, 2 [*gāvaḥ*] *yāḥ sarūpāḥ virūpā ekarūpāḥ*) used especially of the cows, but also of the cloud, milk, sun, frog, snake, etc. So *prṣant* (*prṣati*) spotted (sprinkled), of the cows, the clouds, Maruts' steeds, etc. *Çabala* is used in the same way of Yama's dogs (cf. *Udumbala*) and *çarvarī* are the variegated steeds of the Maruts (cf. B. R. s. v.); so, too, *kilāsi*, properly leprous. In *mayūra-roman*, said of the steeds of Indra, we have an attempt at color-description that reminds us of *kapila* (v. above), literally the word means "peacock-haired," that is, many-colored. Like the compounds of *rūpa* is *spṛhayadvarṇa* (II 10, 5) literally "striving after color," *i. e.* changing color, of Agni; but *varṇa* does not occur compounded with *vi*, *puru*, *viçva* (and is therefore a later word for color than *rūpa*?). Both *rūpa* and *varṇa* denote color, as in *sa-rūpa sa-varṇa* (of like color), *su-rūpa (vi-ṣu-rūpa) su-varṇa*, (of good color, cf. *sudṛçikarūpa*). *Vyeta* (f. *vyenī*) is strengthened from *eta* (f. *enī* and *etā*) with the same idea of many-colored, used of *Uṣas*. Strength of color is denoted by *vi* in composition, or by the accompanying adverb *brhad*, strong, as in *brhadbhānu*, or by *rabhasa*, as in *rabhasāna*.

The word *madhu* (sweet, honey) is compounded with *varṇa* (color), and characterizes the *ghṛta*, melted butter, *Açvins*, and chariot. This *madhuvarṇa* may mean, as *Sāyana* says, "having an agreeable color," or we may take it more literally as "honey-colored."

PART II.

We find from this investigation that the use of color words in the *Rig Veda* is not unlike that in other poetic literatures. The light colors predominate in frequency of occurrence and breadth of application. All that glances, glares, sparkles, is more frequently described than that which is dark and gloomy. Light and dark are the broad general antitheses, real color is less often mentioned, and to fix any exact standard for these colors is impossible, as this is forbidden by the general meaning of the root, or by the uncertainty we are in regard to the real color of the objects described. It is, finally, impossible to mark off distinct meanings for the majority of color words used in the *Rig Veda*, as no one color term is precise enough to answer to any one spectrum color; an indefiniteness that lies, however, in the language alone, since we have no proof that such indefiniteness was the result of physical

inability to distinguish between the various colors or shades of color which in the literature are grouped under one universal term. In regard to the disputed colors, we have two words, hari (harita), and nila, which in the later literature may mean, on the one hand, yellow and green, on the other hand dark and (dark-) blue. A few cases render it possible that the later meaning of these adjectives *may* exist in the Rig Veda; that such later meaning *cannot* exist in the Rig Veda is neither proved nor disproved. Unless nila include the idea of violet we have no term for this color in the Vedic literature.

We pass now to a discussion of Geiger's theory in regard to the explanation of the infrequency or, as he would say, the absence of those terms which denote green and blue. Before criticizing this theory from the standpoint of the Rig Veda, I would call the reader's attention to a few statistics on this very point drawn from much later literature.

In Milton's *Paradise Lost* we have all the light gleaming colors used in abundance, chiefly red and yellow, especially in union with lurid, dazzling, etc., whereas green is mentioned but fifteen times, only nine places show purple (which is indefinite and may mean red, of blood and roses, or blue-black, of grapes), and the test adjective, blue, is found but once (XI 206), although the lapis lazuli is occasionally made to do duty as blue in the term "azure." In the rainbow Milton sees "three listed colors" (XI 866, 897). Going back to the thirteenth century we find in the use of color words in the *Nibelungenlied* a still better proof of how fair an index of ocular development is given us by the employment or non-employment of certain colors in the literature. For here red is, as proved by the overwhelming majority of cases, the favorite color word. Yellow occurs less often, and a pure color word for yellow occurs but once, the idea being generally suggested by comparison with gold. Green is mentioned only four times, but never except in the fixed expressions "green as grass," "greener than grass" (graz or klê), applied to jewels, marble and silk, but never to fields, trees or mountains. Finally, in the 9516 verses of this poem we have not a single mention of blue, although every opportunity is presented the poet for describing sea and sky by this color.¹

¹ The precise use of color words in the *Nibelungenlied* is as follows (the numbers refer to the stanzas in Bartsch's edition): The chief verbs denoting glance and shine are *liuhten* and *schinen*; glancing is denoted by *lieht* (adj.)

Prof. March (in his essay before the Am. Phil. Ass. in Cambridge, July, 1882) has told us that in Beowulf (circa 7th century) no word occurs for blue or green. It may, if I am not mistaken, be added that in the Heliand, about the same time, there is no word for blue.

I now return to the Rig Veda. Weise says, quoting from Geiger the statement that fields and fruits are often spoken of while we never hear of *green* fields: 'All, at first, was vague in color, but gradually a difference was perceived, and men were compelled to find some term to express this newly observed appearance'; and again: 'green was for a long time regarded as yellow.' Geiger himself (Bd. II, s. 305) says of the period represented in the Rig

and (adv.) *lichte schinen* (2006); as noun *lieht* is candle (1005). The adj. (to which, in 80, the word *gevar* (color) is added, in *waete lieht gevar*) is applied to cloth, garments (*kleit, wât, gewant*, 572, 80, 363, 586), *pfeelle* (570, 833), *porte*, *gewührte* (429, 573), precious stones (586, 1783), *bant* (von *golde*, 1654); weapons and armor (*helm*, 1783, 1744, 205, *helmvaz*, 2279), cf. *helmenglanz*, 1841, and *goldvaz*, 1328; *schild* (212, 2170, etc., cf. *der lichten schilde schîn*, 1602), *ringe* (214, 2218), *swerte* (233, strengthened by *vil*, 1972), *brünne* (66, 406), *wîcgewant* (2317, in 1597 *wîcg*, "in herlicher varwe"); *furs*, *riuhe* (954): again, used of flesh (*hende*, 587, *wange*, 618, *ougen* 84, 1286, with *vil* 1069, 1349), the red color of the face (*varwe*, 240); of gold (183, 255, 570) which is red, or of the moon (283, 817, 1620 *der liehte mâne*), of the sun (1624, *liehtez schinen*), the dawn (1360, *den lichten morgen schinen sach*). *Lieht* as adj. corresponds to the verb and noun (*schinen*, *schîn*) of glance, or is united with *rôt*, red, to intensify the redness (2068, *liehtez golt vil rôt*, or 400, *schellen von liehtem golde rôt*, cf. *bouc* . . . *lieht unde schöne was er von golde rôt*).

White, *wîz*: is used of flesh (*hant*, 274, 1011, 1358, 1701, cf. *vil wîze hant*, 661; *arme*, 451), of dress (compared to snow, *mit snêwîzen geren*, 555, 392, compared to *saben*, in *saben wîzer hemedede*, 632, 976), of sails (*wîzer dan der snê*, 508), of silk (*sîder wîz* also *der snê*, 362), of armor (*wîze brünne*, 79, 188, *halsperge wîze*, 1717). White, *blanc*: is used of cloth (*hemedede blanc*, 670), of horse and garment both (von *snê blanken varwe*, 399), of sweat (1882).

Loss of color, paleness, is denoted by *bleich*, generally opposed to red: *varwe* (155, 1665, 1734, etc.), just as the "*liehte varwe*," in 987, is "*des tōdes zeichen*."

Red, *rôt* (occurs most often of all colors): is used chiefly to describe gold, *golt vil rôt*, *golt daz rôte* (268, 854, 951, 999, 569, 687, 1784, 4795, 1427, 1554, 2130, 68, 92, 71, 1795), and *goldesrôt* characterizes garments, saddles, horse-trappings, or goblets (von *golde rôt*, 606). Red alone is the characteristic of the *bougen* (1322, 1634, 2204), or intensified by *vil* (1550), and with *all* the *rôt* is epithet of gold (von *alrôtem golde*, 435, in 1595 *ein zeichen rôt*); or, again, *rôt* betokens the blood color (1624, 1006, *bluotes rôt*), and in 2309 (*brünne rôt*, with gold or with blood, 428, 2309), more particularly *var nach bluote* (212) is blood-colored, the same as *bluotes varwe* (218), so *rôte bäre* (239 reddened with blood), *von bluote rôt* (1011, 1932); armor is bloody red, an *sîme rôtem* (i. e.

Veda: "Not only was the sky not called blue, but nothing was called blue, and it was impossible to call anything blue . . . No word for such an idea could have existed, because the idea of blue was early and late bound up with another idea." We pass over the fact that Geiger, in mentioning VIII 19, 31 (where the sparks according to his theory are called black), fails to mention that the adj. is here applied to fire and contents himself with the remark "in this place *nīla* cannot mean bluish, but blackish" (s. 306), and concern ourselves with the theory alone. We have seen that in other literatures no great reliance can be placed on the occurrence of color words as indicating development or lack of development of color sense. But particularly is this true of the Rig Veda.

bloody) *helme* (191); so (2279) *von pluote rôt unde naz*, and (2088) *die blut varwen helde*. In 921 the blood is *bluomen rôt*, and *rôt* is the color of velvet (*samit rôt*, 705). Fire is thus characterized (*firwer rôten vanken*, 186, 2053, *fiwer rôter wind*, from the clash of swords, 2062, 2275). Fire-red is blood in 2072 (*brünne fiwer rôt*, from blood). Rose-red is the blush (*rôsen rôt*, 241) or the color of the face in general (282); the blush of joy, *freuden rôt* (1497), *vor vreuden rôt* (448), *vrouden rôt* (770), or of shame (614), or of anger (465 in *zorne rôt*) is thus described; as, too, the redness of the lips (*rôsenvarwer munt*, 591). As mentioned above it is the antithesis of *bleich*, pale, as in 285, *er wart . . . vil dieke bleich unde rôt*; the alternation of each produces a mixed color (1666, *gemischt wart ir varwe, bleich unde rôt*). In 281 we have the very Vedic description: *Nu gie die minnecliche, also der morgenrôt tuot ûz den trûeben Wolken*.

Yellow: it is occasionally dubious whether red or yellow be meant when gold (golden) is introduced to express color. With *rôt* expressed, as is generally the case, gold is represented as red, otherwise "goldvarwe" and "guldin," or gold alone may betoken yellow, as in 434, 954 (though here *goldes zein* may be made of gold), or in 712, *die golt varwen zoume*; 376, *waz golt varwen gêren*; *goltvarwen schilde*, 376; or *guldin* in 570, *die guldinen scaemel*; 679, *ein guldin vingerlîn*; so the sword-hilt, *gehilze*, 1784, and 956, *guldine tülle* (though in the three last *guldin* may mean made of gold). Once only have we a genuine color word for yellow, the same word that occurs so often in *Beowulf*: *Die sach man valevahse, i. e. (women) with yellow hair (vahs)*. The passage (1783 and) 1784 (quoted above) gives us in short compass almost all the color adj. of the poem which betoken gleaming, red, yellow, and green: *ein vil liehtez wâfen, ûz des knopfe schein. Ein vil liechter jaspes, grüener danne ein gras. Sîn gehilze daz was guldin, die scheide ein porte rôt*.

Green is mentioned very rarely. Once, in the passage just quoted, *grûen* designates the jasper, greener than grass, and the same comparison is found (404): *von edelm marmelsteine grüne alsam ein gras*; so, too, the jewels glance with grass-green light against (wider) the (yellow) gold (436), cf. 577, *lûhte gegen der wât*, and 799, where the color of the face surpasses the glance of gold. Instead of grass we find clover once employed to illustrate the color

It is in fact misleading when one tells us that green things are mentioned so often and yet not called green. The natural implication is that we have the green color left out in a mass of literature filled with *descriptions* of earth's products. So, for instance, Montagu Lubbock understands Geiger (v. in his recent article in the *Fortnightly Review*). But, we ask, what are the trees and fields called? How often in the *Rig Veda* does the poet allude to these objects of nature and in what connection do they appear? Is the character of the work such that the omission of green and blue has really the weight that Geiger lays upon it? It will be seen, I think, if we ask how often the *Rig Veda* writers took the trouble

of the green silk "von Zazamanc," as opposed to that of Arabia which was "wiz also der snê," whereas the other is "grüen alsam der klê." In all these cases green is used merely in this one set expression.

The adjective blue [blâo] does not occur although the heavens are frequently mentioned, journeys are taken on the water, etc., etc. In 894 the verb *zerbliuwen* which occurs in *ptc.* form *zerblouen*, has no reference to color, even if we admit the identity of "blue" and "blow."

Neither violet (purple) nor brown are mentioned. Black occurs a few times: *pfelle* (cf. 952) *swarz alsam ein kol* (365); clothes are said to be *von rabenswarzer varwe* (402), as is *sabel* (*zobel*, 1826). *Harnaschvar* is the black color of grime. The often mentioned *moere* (75, 570, etc.) are said to mean originally black horses (cf. *Bartsch*, note to 75) but in *Nib.* no trace of color is associated with the word. Mixed in color is grey, *grâ*, "ze kleidern *grâ unde bunt*" (59); so *grīs* (1734) especially of grey hair, *mit einer grisen varwe* (*gemischt war sîn hâr*), and *grīs* means simply grey with age, *den alt grisen man* (497); so *grise* (old men) is opposed to *die tumben* (young) in 1798 (cf. 768 *die tumben unt die wisen*). Variegated is expressed by *bunt* (59 and oft) or by *gemâlet* (1294). Color itself in *Nib.* is regarded as increasing, *mêrte sich ir varwe* (561); lighting up, *erzunde sich* (292); paling away, *erblûete ir liechte varwe* (240); or as simply glancing, *ir varwe . . . diu lûhte ir ûz dem golde* (1351). It may be bad, *missevar* (= pale, of men, 1590, and of ringe, 2218). In 1702 color seems to be considered as a covering (*varwe*, cf. *Sk. varna*, *var*): *ein hult von liehtem pfelle ob sîner varwe lac*, the covering lay over the color (cf. 439). "Falsified color" is *rouge* (*gevelschet frouwen varwe*, 1654). Both *schînen* and *liuhten* are used absolutely, or with *gegen* (*wider*) to express contrast of color. (282) *lûhte vil edel stein*, (1761) garments, (cf. 1663, 570, and *erlûhte*, 806); as adverb *lâterlich* is used (283). *Schînen* and *liuhte* are united in 434, *lûhte mit schîne* (cf. 647, *liehten schildes schîn*, and 399, 2348, etc.). We find also the substantive meaning of these verbs expressed by *schîn* or *glanz* (*passim*).

Peculiar verbs of glance are *blicken* (of the sword-stroke, 2077), *stieben* (the blows fall so rapidly on the hero *daz er stieben* began, 2277 cf. 2278), so *lougen* (457, 2062, etc., cf. 1612). In 1620 we have *prehen* used with *schînen* of the moon, and in 1841 *lohen* of breastplate (with *glanz*). As an active verb appears *beliuchten* in 1702 (*der tac . . . belûhte den schilt*).

to speak of nature's beauties in grass and wood and meadow (*i. e.* where *green* would be used), that these objects are rarely referred to except in a most unpoetically practical manner, where not only green but almost every other epithet that enhances the idea is generally omitted. I consider this view as worthy of notice, for Geiger's remark in regard to the "green fields" is frequently quoted, and his general essay is I believe all that has been written on the subject from a Veda standpoint. A few statistics may, however, serve to show how comparatively little ornate mention is made of these natural products anyway, and, when alluded to, how scanty a description of any kind is added.

In the first place grass (*tr̥ṇa*) is mentioned only five times in the Rig Veda, and in not one of these cases is any epithet at all applied to it. Not only are the poets silent in regard to its color, but in the same way they are silent in regard to its growth, general appearance, luxuriance, etc. It is always in such pictureless expressions as "eat grass," "burn grass," "provide grass," "lie on the grass," "bring grass and water," the bare grass without epithet. So the plants and vegetables (*virudh* and *oṣadhī*) are, although occasionally provided with epithets, almost always regarded from a practical, utilitarian standpoint. They are full of sap (*pay-asvat*), sweet (*madhumat*), strengthening (*ūrjasvat*), various in kind (*viçvarūpa*, this *may* mean many-colored), they have a hundred different appearances (*çatavicaḥṣaṇa*). Only once is the aesthetic side touched upon, for they are *supippala*, provided with pretty (*su*) fruits, and even this is explained by B. R. as having *good* fruits, *i. e.* useful. *Babhrū* (see above) is used substantively to denote certain plants. *Çāda* (a word of doubtful meaning, B. R. "grass," Grassmann "soragefäss") occurs only once and without epithet. Finally, *yava*, corn, grain (without descriptive epithet) gives us the word *yavasa* (*n.*), the field of grain or corn-meadow, and may be translated simply "the meadow." This word is used upwards of twenty times, but always alone by itself, and confined to use in such expressions as "rejoice as cows in the meadow," "grow fat in the meadow," "a wild beast in the meadow," "feed in the meadow," "return from the meadow," "like rain on the meadow." This is all, we are not told that the meadows are beautiful, or sunny, or shady, or pleasant, or soft, or wide, or sloping—surely then if we are not told that they are *green* it need not surprise us. Another word for field in general is *kṣetra* (the later *kedāra* is not found in Rig Veda), and here we find certain epithets attached: V 62, 7,

a field is wished for "fruitful and good" (tilvila, bhadra), again it is called pleasant (raṇva) X 33, 6: or distant (araṇa) VI 61, 14: but undesirable is the fruitless field (agavyūti) VI 47, 20. (II 31, 15, mahi kṣetram *puruṣcandram*, wide glancing, has reference not to earthly but to heavenly fields.) In all these we see that use and not beauty is in the singer's thought. The earth itself (bhūmi, kṣam, gmā prthivī, etc.) is called the immeasurable, the extended, the strength-giver, the wide, the great, the firm, etc., the four-cornered (caturbhr̥ṣṭi), and once as we have seen (cf. §3, prthivīm harivarpasam) a doubtful color word is given it. For foliage we have parṇa (n.), literally feathers (later pattra and dala do not occur) used once X 68, 10 "as trees robbed of their foliage" (once also as special tree). Often as the trees, vana, vanaspati, vanin, vṛkṣa, (taru and druma do not occur) are alluded to, we find no variety of poetical description, though vṛkṣakeṣa occurs as epithet of mountains (girayo vṛkṣakeṣāḥ), but once as soma plant vṛkṣa is termed red (aruṇa), and supālāṣa, well covered with foliage, also occurs. The boughs (vayā and ṣākhā) are spoken of as branching (dividing) and ripe, but not otherwise. They are noticed but sixteen times in the thousand hymns (and three of these allusions are in metaphor.)

We must then, I think, admit that there is another cause than that given by Geiger and Weise for the lack of certain color words. It is because those objects in nature such as woods and fields are not brought in to be embellished—are not meant to be described. It is merely that *they* may embellish an idea that they are introduced at all; they are subordinate objects to the greater purpose of the poet. For we are not reading rhapsodies over nature when we peruse the Rig Veda. The aim of the work is different—to praise the gods and increase in worldly goods, or rather, to praise the gods *in order thereby* to increase in wealth is the one aim that inspires the overwhelming majority of the hymns. Earthly objects are therefore chiefly introduced to point a song, to specify what good the singer demands in return for his hymn. Thus it happens that the objects of earth, corn, trees, fields, are, so to speak, merely hurried into the song and then drop out of it, while the poet proceeds to glorify the deity by extolling his might and beauty. And thus we come to the explanation of the second fact—the blue fails amid the descriptions of heaven. But it is not quite exact to say the description of heaven. The vault of heaven (divos) nākaḥ-, nākasya pr̥sthā, is spoken of only about once in every forty

hymns, and then accompanied by no color word at all. Heaven's vault is not called blue, but it is also not called yellow or red, the only epithet given it that suggests color is in *citraçocis*, clear-shining, and *agr̥bhitaçocis*, of inconceivable brightness; beside these the only other epithets of any sort applied to it are wide (X 113, 4), lofty, mighty (VII 86, 1, and VII 99, 2). This firmament is not addressed as a deity, it is simply a locality, and is therefore merely introduced as an incident; he mounted in the vault of heaven, he stands therein, he upholds it, he adorned it with stars (I 68, 5) (cf. X 68 11), etc. The cosmology of the Hindus placed between this vault and the earth the real often-named three-fold sky—the *div*, *dyauḥ*. This heaven is, however, in itself color, “the glancing”; it is light. But the firmament (*nāka*) is not dark though it lies beyond the region of light. According to the development theory the blue vault should be dark, but in I 19, 6 we find *nākasya rocane*. We cannot, however, regard this as a mere confusion of firmament and realm of light, for these are carefully distinguished (cf. Zimmer *Altindisch. Lebens.* 358). One has to climb above *dyauḥ* to reach the *divo nāka* (A. V. 4, 14, 3) (cf. R. V. VI 8, 2, I 34, 8) which is supported like a pillar (IV 13, 5) and has a (rounded) back, *nākasya pr̥sthā* (I 125, 5, cf. III 2, 12) or *nākasya sānu* (VIII 103, 2). *Dyauḥ*, *svar*, *vyoman*, *rajas* (*antarikṣam*), give the theatre for the color-display of the clouds and storms. If we understand the meteorological notions of the Veda we shall not be able to say that the blue heaven is often described but never called blue. The blue heaven, *i. e.* firmament, is not “*often described*,” it is scarcely *described* at all, and stands above the realm of which the Vedic poets give us their glowing accounts, outside the stage on which the wonders of heaven are enacted. That which is described is the lower heaven, not the blue firmament—where, had we the same views in regard to the heavens, we also should find no occasion to speak of blue. The mass of color description, as of all other description, falls where the whole interest of the poets lies, upon the active powers of the atmosphere and the lower sky. These were the subject of their hymns, and to describe these powers was to glorify and to worship them. It was not the blue firmament with which the Vedic singers were impressed, their deities do not live there, and therefore, as the whole object of the hymns is bound up in the gods, it is easy to see why this firmament was so seldom alluded to as compared to the innumerable descriptions of the (lower, not blue but shining) atmospheric sky. Here is the real

abode of their divinities. It is, therefore, not strange that, being so seldom alluded to, *nāka* has no real epithet of color given it, while we find the colors which appertain to the lower heaven, the home of the gods, are often employed by the poets. This lower heaven is not only the home of the gods, it is a god itself, *dyos pitā*, whereas the *nāka*, firmament which is blue, is not conceived as divinity. The gods whose praises the poet sings are red and yellow, white or dark, the colors of sunrise and lightning, of the morning clouds and the gleam of the sun. The Vedic singer occupies himself with the foreground, he was too busy with the prominent features and characters of the scene to care much for the background, of his picture. Beautiful things *per se* he did not celebrate, for beauty was an incident of his song, not the theme. So, too, on earth, beauty of color did not often appeal to the unaesthetic mind of the Vedic poet. And then, for instance, we find when the lotus is mentioned, it is more as something worthy of notice for its beauty of smell than for its beautiful color, and amid all the luxuriant vegetation of India we have only some half dozen plants mentioned by name (v. Zimmer, *Altind. Leb. s.* 71). The singer gave them no adjectives, for only to mention them was, so to speak, an adjective to his train of thought, and hence all his adjectives of description are meagre, except where they apply to the persons of the gods, or clouds, or the particular object longed for by the poet.¹

There is a second point that is involved in the quotations given above from Geiger and Weise. It is in regard to the lack of clearness, the inexactness of many Vedic color terms. From this, however, we cannot draw the conclusion that the sense of color was inexact, for we could scarcely affirm this if it were proved to exist in the language used. There is, however, no literature where color words are applied to objects which are so constantly indefinite in point of color. The gods, the natural forces of the atmosphere, the clouds, the steeds of the gods, horses, wolves, cows—these are the objects of which color is chiefly predicated. The application of color words is made in most cases where we ourselves would be

¹ Even as late as the second century B. C. we find an analysis of light that gives only three colors and excludes green: *Anugīta*, *Mbh.* XIII 50, 46 (cf. XII 184, 35) *jyotiṣaṣca guno rūpam, rūpam ca bahudhā smrtam* (the quality of light is color which is manifold), and these colors are given as (black, white) red, yellow and blue. Yet in the *Rig Veda* (X 55, 3) light is declared to consist of thirty-four different parts: *catuṣtrimiçitā purudhā vicaṣṭe sarūpeṇa jyotiṣā vivratena*.

at a loss to say what exact term might best describe the object. If we found that a word which means yellow alone is applied to something which is and can be only red or green, then we might admit a confusion of epithets and of idea. But such cases do not occur. It is, again, impossible to say at what period the idea of the root that underlies the color word has passed into abeyance and left a fixed color term. Green and yellow may both at the same time be denoted by the burn-color *hari* with the subsidiary notion of fiery or shining. The conception is not indefinite because the appearance is described by a general term. "Blue," to our minds, embraces many colors, but the one name covers all shades. We cannot say that yellow preceded green in the Teutonic languages though *gêlu* and *gruoni* come together from this same root *ghar*. Nor can we say at what time the "glare" (*ghar*) in *gêlu* ceased to be prominent.

We conclude, then, by affirming: 1st, Non-mention of the colors green and blue is not proved for the Rig Veda literature; 2d, That the sky is not called blue nor the fields green rests on reasons which have nothing to do with the development of the retina; 3d, We cannot admit that either color words or color perception of those who composed the Rig Veda were inexact or imperfect, for the cause of the apparently inexact employment of words lies in the variable and uncertain color of the objects to which the color terms are applied.

The theory of the development of the color sense rests, from a literary point of view, in great part on negative data. From the standpoint of physiology it has no support. Lubbock has shown that savages have perfect sense of color, Wallace has affirmed that non-mention of color is in general no proof that it was not appreciated. We have endeavored to show that this is true at all times and to explain the reasons for this fact in the Rig Veda.

If the Vedic literature fail to support the theory, one of the strongest of these negative proofs is withdrawn, and even the absence of certain colors in Homer may be deemed perhaps of less significance than has been claimed when we consider that the *Nibelungenlied* exhibits, twenty centuries later, the same absence of corresponding colors, and a like ratio in the greater use of terms denoting red and yellow.

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